

**DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER PROTECTION BUREAU
Metcalf Building, Helena, Montana 59620
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ENVIRONMENTAL ASSESSMENT (EA)

Division/Bureau: Permitting & Compliance Division, MGWPCS Permits;

Project or Application: Estates at Wilderness County Water and Sewer District; MTX000194

Description of Project: The permit authorizes the discharge of treated residential-strength wastewater from 271 single-family residential lots, 1 commercial lot located at the current lodge location, three “cabin” pod areas to be used for 47 condominiums and a clubhouse with a pro shop, a restaurant, and a bar. The proposed development is located approximately 3 miles northwest of Eureka, on the west side of Highway 93 North. Each single-family lot, each condominium, and the clubhouse will have an individual E/one GP 2010 grinder pump station, which will pump raw sewage to a pressure sewer (force main) collection system. Wastewater from the collection system will be routed to one 215,000-gallon community septic tank. The wastewater will gravity flow from a 215,000-gallon community septic tank to a 145,000-gallon recirculation tank. Level II wastewater treatment will occur in the recirculating sand filters (RSFs). Effluent collects in the RSFs and goes to splitter valves that send 3/4^{ths} of the effluent back to the recirculation tank and 1/4th to a 5,000-gallon dose tank. From this dose tank, effluent is pumped to a distribution box that routes the effluent to one of five (5) 4,500-gallon dose tanks (“chambers”). Effluent is discharged to a total of 10 subsurface drainfields (six zones, each). A flow meter will measure flow from the dose tank prior to discharge to the drainfield distribution box and the subsurface drainfields. The design flow is 96,650 gallons per day (gpd). Outfall 001 is located in the SE, NW of Section 32, Township 37 North, Range 27 West in Lincoln County at 48° 55’ 43” North latitude and 115° 8’ 37” West longitude. The Department has determined that the shallowest ground water beneath the site exists under confined conditions and will not be impacted by the effluent discharge. Therefore, a ground water mixing zone is not required for this discharge.

Benefits and Purpose of Proposal:

Adequate treatment of residential-strength wastewater before discharging to the subsurface.

Description and analysis of reasonable alternatives whenever alternatives are reasonably available and prudent to consider:

None

Listing and appropriate evaluation of mitigation, stipulations and other controls enforceable by this or another government agency:

See Fact Sheet

Affected Environment and Effects from the Proposed Project:

<u>Key to Rank</u>	
NA	<i>Not applicable</i>
N	<i>No effects</i>
B	<i>Potentially beneficial effects</i>
A	<i>Potentially adverse effects</i>
M	<i>Corrective action required</i>
P	<i>Additional permits will be required</i>

Rank	Consideration	Remarks
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PHYSICAL AND BIOLOGICAL ENVIRONMENT			
N	1.	SOIL SUITABILITY, TOPOGRAPHIC AND/OR GEOLOGIC CONSTRAINTS (soil moisture, unstable soils or geologic conditions, steep slopes, erosion potential, subsidence potential, seismic activity)	Discharge will increase moisture in the unsaturated zone. There are no known unique geological features at the site. The ground slope in the drainfield area is relatively flat (0.02 ft/ft). There is no indication that the site chosen for the wastewater system will become unstable due to construction and proper operation of the system.
N	2.	HAZARDOUS FACILITIES (power lines, hazardous waste sites, distances from explosive and flammable hazards including chemical/petroleum storage tanks, underground fuel storage tanks and related facilities such as natural gas storage facilities and propane tanks)	
N	3.	AIR QUALITY (effects to or from project, dust, odors, emissions)	No significant impacts have been determined.
N	4.	GROUNDWATER RESOURCES & AQUIFERS (quality/nondegradation, quantity/reliability, distribution, uses/rights, number of aquifers, mixing zones)	No significant degradation of ground water or surface water. The shallowest aquifer is confined by a gravelly-clay. The discharge will not impact the ground water (see Fact Sheet for details).
N	5.	SURFACE WATER RESOURCES (quality/nondegradation, quantity/reliability, distribution, uses/rights, storm water controls, source of community supply, community treatment, mixing zones)	The nearest downgradient surface water from Outfall 001 is Lake Kooacanusa, which is approximately 2,000 feet from the proposed subsurface drainfield area. Impacts to surface water were determined non-significant degradation (see Fact Sheet for details).
N	6.	VEGETATION AND WILDLIFE SPECIES AND HABITATS, INCLUDING FISHERIES AND AQUATIC RESOURCES (threatened, endangered, sensitive species, prime habitat, population stability, potential for human wildlife conflicts, effectiveness of post-disturbance plans)	
N	7.	UNIQUE, ENDANGERED, FRAGILE, OR LIMITED ENVIRONMENTAL RESOURCES (biologic, topographic, wetlands (within one mile), floodplains (within one mile), scenic rivers, natural resource areas, etc.)	
N	8.	LAND USE (waste disposal, agricultural lands [grazing, cropland, forest lands, prime farmland], recreational lands [waterways, parks, playgrounds, open space, federal lands), access, commercial and industrial facilities [production & activity, growth or decline], growth, land-use change, development activity)	The land was originally open area that is sparsely forested. A change in habitat for some native species may cause relocation into adjacent undeveloped areas.
N	9.	HISTORICAL, CULTURAL, & ARCHEOLOGICAL (sites, facilities, uniqueness, diversity)	Should cultural materials be inadvertently discovered the permittee should contact the State Historical Preservation office so the site may be investigated.
N	10.	AESTHETICS (visual quality, nuisances, odors, noise)	The community septic tank, recirculation tank, recirculating sand filter treatment system, and drainfields (outfall 001) are subsurface and are not visible and will not create aesthetic issues.

N	11. DEMANDS ON OR CHANGES IN ENVIRONMENTAL RESOURCES INCLUDING LAND, WATER, AIR, OR ENERGY USE (need for new or upgraded energy sources, potential for recycling, etc.) {See (4), (5), and (8).}	Potable water will be provided via onsite community supply wells completed in the confined aquifer(s) beneath 100 feet in this area.
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Rank	Consideration	Remarks
IMPACTS ON THE HUMAN POPULATION		
NA	12. CHANGES IN DEMOGRAPHIC CHARACTERISTICS (population quantity, distribution and density, rate of change)	The project is for new residential and minor commercial development.
N	13. GENERAL HOUSING CONDITIONS (quality, quantity and affordability)	
NA	14. POTENTIAL FOR DISPLACEMENT OR RELOCATION OF BUSINESS OR RESIDENTS	
N	15. PUBLIC HEALTH AND SAFETY (medical services and facilities, police, fire protection and hazards [see (2)], emergency medical services [see (8), LAND USE for waste disposal])	Once built out and fully occupied there could be a potential for the need of increased services.
N	16. LOCAL EMPLOYMENT AND INCOME PATTERNS (quantity and distribution of employment, economic impact)	
NA	17. LOCAL AND STATE TAX BASE AND REVENUES	
NA	18. EFFECTS ON SOCIAL STRUCTURES AND MORES (social conventions/standards of social conduct), DEMANDS ON SOCIAL SERVICES (law enforcement, educational facilities [libraries, schools, colleges, universities], welfare, etc.)	
N	19. TRANSPORTATION NETWORK (condition and use of roads, traffic flow conflicts, rail, airport compatibility, etc.)	
N	20. CONSISTENCY WITH LOCAL ORDINANCES, RESOLUTIONS, OR PLANS (conformance with local comprehensive plans, zoning or capital improvement plans)	
NA	21. REGULATORY RESTRICTIONS ON PRIVATE PROPERTY RIGHTS (<i>Are we regulating pursuant to a police power? Does the Agency action restrict the use of the property beyond the minimum necessary to achieve compliance with the Act? What are the costs of such additional restrictions resulting from proposed permit conditions? Are there other, less restrictive ways of achieving the same goal? See your assigned legal counsel for assistance preparing this section. [See the Private Property Assessment Act checklist accompanying this permit for details.]</i>)	

